Serial Number: 09/210055

Filing Date: December 11, 1998

Title: METHOD AND APPARATUS FOR CONTROLLING IMAGE TRANSPARENCY

Assignee: Intel Corporation

REMARKS

This Response is filed in reply to the Office Action mailed on December 10, 2003. Claims 32 and 34 have been amended to correct a typographical error, and not for reasons related to patentability. No claims are canceled and no claims are added. As a result, claims 20, 22, 24, 26, 28, 32, 34 and 37 are now pending in this Application.

§102 Rejection of the Claims

Claims 20, 22, 24, 26, 28, 32, 34 and 37 were rejected under 35 USC § 102(e) as being anticipated by Watanabe et al. (U.S. 6,329,988, herinafter "Watanabe"). The Applicant does not admit that Watanabe is prior art and reserves the right to swear behind this reference at a later date. In addition, because the Applicant asserts that the Office has not shown that Watanabe discloses the identical invention as claimed, the Applicant respectfully traverses this rejection of the claims.

Anticipation under 35 USC § 102 requires the disclosure in a single prior art reference of each element of the claim under consideration. *In re Dillon* 919 F.2d 688, 16 USPQ 2d 1897, 1908 (Fed. Cir. 1990) (en banc), *cert. denied*, 500 U.S. 904 (1991). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, "[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*" *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). "The *identical invention* must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP § 2131 (emphasis added). The following paragraphs will be directed to independent claims 1, 19, 23, and 30, as well as the claims the depend from them.

It is respectfully noted that Watanabe does not provide "assigning a transparency factor", as claimed by the Applicant in claim 20, nor "modulating the transparency of an image", as claimed by the Applicant in claims 22, 24, and 37, nor "calculating the transparency factor" as claimed by the Applicant in claims 26 and 28, nor modulating a "transparency factor of an image" as claimed by the Applicants in claims 32 and 34. Instead, Watanabe is directed to the

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issue of indirect reflection of light by an object, particularly as it relates to a "diffuse reflection surface (surface with less gloss) [e.g.,] ... the skin of a human being." See Watanabe, Col. 1, lines 15-24. This concept is completely different from that of image transparency as addressed by the Applicant.

Watanabe's diffuse reflection problem involves dealing with "indirect reflection from a ground surface", and not image transparency. Watanabe, Col. 3, lines 20-23. "The ground surface signifies a floor surface, a wall surface, a table surface or the like ...". Watanabe, Col. 3, lines 35-36. "The indirect reflection is light coming from the ground surface to the object ...". Watanabe, Col. 3, lines 40-41. An "object develops its own color on the basis of the whole diffuse reflection quantity, an object diffuse reflection coefficient and the light quantity from the ground light source ...". Watanabe, Col. 4, lines 11-14. All forms of equations for Watanabe's diffuse reflection quantity (I) depend upon the distance (r₀) between the object surface (A) and the ground surface (G). See Watanabe, Col. 7, line 25 – Col. 8, line 40. In fact, Watanabe only mentions the idea of transparency with respect to the ability of ray tracing techniques to render a good result for diffuse reflection by a transparent-glossy object, and that a transparent object may be capable of diffuse reflection. See Watanabe, Col. 1, lines 52-54; Col. 3, lines 36-37; and Col. 11, lines 33-35.

Image transparency, as described by the Applicant, may "vary from opaque to clear." Application, pg. 2, line 25. "An opaque image permits no light from an image behind the opaque image to be viewed. A clear image permits all light from an image behind the opaque image to be viewed." Application, pg. 2, lines 26-27. Thus, "as transparency progresses from opaque to clear, the amount of viewable light emanating from images behind the image whose transparency is being modulated increases." Application, pg. 3, lines 1-2. In short, image transparency pertains to the amount of light an image may pass from objects located behind the image.

It should be apparent that the diffuse reflection quantity (I) of Watanabe is in no way equivalent to the transparency factor of the Applicant. As expressed in its simplest form, the transparency of an image may operate so as to be affected only by the angle between a surface normal viewing vector and a surface normal object vector. See Application, pg. 4, lines 10-20, and FIG. 1. However, Watanabe's diffuse reflection quantity (I) depends on the distance

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between a light reflecting surface and the object surface, as well as other factors that do not make any difference with respect to image transparency. See Watanabe, Col. 7, line 26 Col. 8, line 40.

Therefore, Watanabe does not assign "a transparency factor" as asserted in the Office Action with respect to claims 20, 22, 24, 26, 28, 32, 34, and 37. Watanabe also does not "modulate the transparency of an image" as asserted in the Office Action with respect to claims 22, 26, and 32. Since Watanabe does not teach the use of a transparency factor as claimed by the Applicant, what is disclosed by Watanabe is not identical to the subject matter of the embodiments claimed, and the rejection of claims 20, 22, 24, 26, 28, 32, 34 and 37 under § 102 is improper.

If the Examiner is not firmly convinced of the difference between image transparency as taught by the Applicant, and the diffuse reflection quantity (I) disclosed by Watanabe, the Applicant's representative respectfully requests an interview. Reconsideration and allowance are respectfully requested.

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CONCLUSION

The Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone the Applicant's attorney, Mark Muller at (210) 308-5677, or the undersigned at (612) 349-9592 to facilitate prosecution of this Application. If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By his Representatives,

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Date Heb. 10, 2004

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 10th day of February 2004.

Name

Signature